California ISO

Stakeholder Comments Template

Resource Adequacy Enhancements – Straw Proposal Part 1

This template has been created for submission of stakeholder comments on Resource Adequacy Enhancements Straw Proposal Part 1 that was published on December 20, 2018. The Straw Proposal Part 1, Stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at: http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx

Upon completion of this template, please submit it to initiativecomments@caiso.com.

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Submissions are requested by close of business on February 6, 2019.

Please provide your organization's comments on the following issues and questions.

1. Rules for Import RA

Please provide your organization's feedback on the Rules for Import RA topic. Please explain your rationale and include examples if applicable.

Specification of RA Import Resource Source

From the CAISO data provided, it is not clear that there is a problem with deliverability or reliability of imported RA energy. In fact, because RA imports may be provided from multiple generation units, the availability is greater than a single generation unit located within the CAISO BAA. We encourage the CAISO to not require a "resource specific" designation for "Non-Resource Specific Resource" import RA.

The CAISO indicates a concern that there may be double counting with EIM entities. EIM entities have multiple mechanisms to meet their sufficiency test, and until EIM entities count RA in a manner identical to CAISO and CPUC methodology, it is not possible in the DA IFM process to actually verify "double counting". The CAISO would need a consistent WECC wide RA counting methodology to meet its objective to verify EIM sufficiency calculations and that verification would have to be dynamic, likely up to the day-ahead schedule. EIM entities are allowed to adhere to their own methodology, which may include partial resources and system purchases. The CAISO is better served by periodically auditing EIM entities to ensure proper

accounting practices. An CAISO monitoring process of external unit capacity must accommodate full or partial unit capacity, and allow for transactions up to the DA schedule, thus making it difficult to get accurate data. If the CAISO feels that it needs to know actual generation capacity behind "non-resource specific resources", SC's could, on an advisory basis only, provide confidentially their controlled generation and associated BAAs where the generation is located. However, the CAISO should recognize this is advisory only, and that to maintain the reliability of supply of non-resource specific supply, the CAISO should continue to allow multiple generation units and units which are typically distributed in multiple BAAs to provide energy to an CAISO scheduling point for import.

Real Time Bidding Requirements for RA Imports

The current Non-Resource Specific Resource construct allows for the CAISO to award a DA schedule or provide a RUC schedule in the DA so that the SC can schedule gas to the unit, schedule the unit to deliver the energy and procure the transmission to deliver the energy to the ISO, and ensure that all BAAs on the tag have sufficient time to approve the tag. A real time delivery option is extremely difficult and costly. It may be feasible if all Non-Resource Specific Resource capacity were connected to the CAISO as a dynamic transfer. However, there is limited capability for dynamic transfers, and this is a costly vehicle, as the transmission is reserved whether it is used or not. A real time delivery option could be best enacted through a binding HA market, with a fixed payment for bid/clearing price/award. This would also meet WECC scheduling requirements and timelines. The CAISO states "this change would also provide more comparable treatment for RA imports and internal RA resources". But there are differences between internal generation and imports that the CAISO must recognize. Internal generation may have long start up times and limitations on dispatch, such as ramp rates and minimum loads. Will the CAISO pay bid cost recovery to an external "non-resource specific resource" identified by an SC to support import RA? Will the CAISO now allow start-up time for an import RA energy dispatch? Or will the CAISO still expect the identified resource to instantaneously deliver energy through the intertie? Will the CAISO allow for ramping energy at the start and end of the hour? The CAISO must consider WECC scheduling requirements and regional scheduling needs, i.e. "seams issues", and the differences that are inherent in intertie scheduled energy as opposed to internal generation. It is likely that Non-Resource Specific Resource supply is more comparable to EIM entity supply resources than internal CAISO generation supply. The CAISO might re-consider a binding HA market which would then be equitable for both internal generation and for imports, and then for RT, use a flexible capacity product with 5-minute inc/decs for internal generation and other generation, such as EIM generation, which is controlled real time by the ISO. At this point, it would appear that a real time bidding requirement for RA imports is feasible only to the extent that the CAISO provides an advanced binding award, such as through an HA market. A RT bidding requirement does not appear feasible at this time without software and market changes.

15-Minute Bidding and Scheduling for RA Imports

We support 15-minute scheduling and encourage the CAISO to continue to work with WECC BAAs to enact transmission scheduling on a 15-minute basis across the entire western interconnect. However, this is a big lift, as nearly all of the West transacts on the interties on an hourly basis. The CAISO should consider a 15-minute scheduling requirement on import RA only simultaneously with the certification that the BAA in which an SC's resources are located has implemented 15-minute scheduling. However, to enact 15-minute bidding and scheduling on only the CAISO side of the transaction requires the loss of at least a portion of the hourly transmission procurement, and often of the delivery of the energy unscheduled by the CAIOS intrahour, thus causing imbalance problems, inadvertent delivery problems and potentially CPS-1 and CPS-2 violations for the BAA in which the generation unit is located. We believe that with current FERC support, interest from BAAs, and coordination with OATI, 15-minute scheduling can become a reality, but will require more coordination and tag creation and approval automation. Optimally, the CAISO would work with WECC and other BAAs to establish new WECC standards to codify 15-minute scheduling across the entire western interconnect. It is premature at this time to enact a 15-minute bidding and scheduling requirement for RA imports. An interim solution to providing the balancing energy needed associated with more renewable resources could be to re-enact an Hour-Ahead market with bid/offer and HA scheduled generation, thus providing an equal market to imports and internal generation. In the RT, the CAISO would use a bid based flexible capacity product that would give the CAISO the ability to ramp a unit, along with 5-minute inc/dec and EIM dispatch.

2. RAAIM Enhancements & Outage Rules

a. Please provide your organization's feedback on the Addressing Planned and Forced Outage Issue topic. Please explain your rationale and include examples if applicable.

We support modifications to RAAIM and suggest that the CAISO look at the ERCOT market, where they have a concept of critical hours. The CAISO could assess penalties if an RA resource is not available in the 50 critical hours of the year, for example, with those hours being aligned with peak stress on the grid. The CAISO would have a process to identify those hours and notify the market. The 115% LSE procurement obligation provides for periodic loss of capacity due to forced outages. The CAISO should continue to approve planned outages and exempt generators who apply for planned outage approvals in a queued process.

b. Please provide your organization's feedback on the RAAIM Enhancements topic. Please explain your rationale and include examples if applicable.

While we support elimination of RAAIM, the concept to change NQC as a function of forced outages in forward years inhibits forward contracting of RA as generation

owners typically sell a set capacity (NQC) and have a contractual obligation to provide that capacity. By allowing some reduction of NQC, suppliers will likely be forced to reduce the quantity of RA available for sale to load, to cover for future NQC reductions as calculated by the CAISO due to possible forced outages. This will likely result in excess costs to ratepayers by reducing the overall supply of RA. The state seems to be encouraging forward procurement of RA, and the CAISO initiatives should align with these goals. To effectively contract RA forward, there should be a mechanism for a supplier to offer a known quantity of NQC for a known period and not have it changed during the contract term. This term should likely be for up to 3 years, based on on-going discussions on RA at the CPUC. The CAISO should explore ways to ensure NQC does not change or simplify and improve replacement and substitution rules.

i. Please provide your organization's feedback on the Availability & Performance Assessment Triggers options presented in the proposal.

3. Local Capacity Assessments with Availability-Limited Resources

Please provide your organization's feedback on the Local Capacity Assessments with Availability-Limited Resources topic. Please explain your rationale and include examples if applicable.

The CAISO should begin now to perform year 1, 2, and 3 LCT studies to align with other anticipated CPUC mandated LSE forward procurement RA obligations, so that LSEs will have data on which to base their local RA procurement. The current CAISO process to study year 1 and 5 is insufficient for an LSE RA local procurement obligation which will have associated compliance requirements, penalties and backstop procurement.

4. Meeting Local Capacity Needs with Slow Demand Response

Please provide your organization's feedback on the Meeting Local Capacity Needs with Slow Demand Response topic. Please explain your rationale and include examples if applicable.

We support slow demand response resources with appropriate markets to reflect their value. Obviously, it is difficult for slow or long lead time DR to bid and deliver in the real time. An hour ahead binding market would go a long way to solving slow demand response issues. If the CAISO chooses to force a slow demand response DR resource to settle in the RT market, then the CAISO needs a better forecast of RT prices, which currently frequently mute scarcity conditions and thus do not accurately reflect the value of the DR, which typically needs scarcity pricing to be effective. If the CAISO chooses to not pursue an HA solution, the likely next best option would be to dispatch slow DR in the DA until scarcity pricing is better reflected in the RT market.

Additional comments

Please offer any other feedback your organization would like to provide on the RA Enhancements Straw Proposal Part 1.

Since the ISO is now performing a comprehensive review of the CAISO's RA provisions in this initiative, we have recommendations to (1) re-evaluate intertie liquidity and (2) consider a bid-based flexible capacity product, in addition to reconsideration of the HA market discussed above.

1. We remain extremely concerned that the continuing CAISO intertie proposals, such as these proposed new RA rules and the recent intertie deviation penalty, may reduce the quantity of imported energy that market participants are willing to offer. This is troublesome if the trend for supply of internal gas-fired generation resources within the CAISO BAA continues to decline, and the CAISO becomes even more dependent on imported energy. The CAISO should refresh its study on import liquidity to ensure the continued supply of imports. The CAISO also should verify that changes are actually needed to the RA import construct by showing that there is a deficiency in the supply of energy from RA import capacity.

2. We are also extremely concerned about ISO dependence on EIM resources to manage the large daily solar ramps. As other neighboring WECC states enact RPS requirements, it is reasonable that the EIM entities will have less capacity available for ISO dispatch and will use their capacity to firm their new renewable resources. The need for flexible capacity in the CAISO BAA must be addressed and use of EIM capacity should be viewed only as an interim solution. The ISO could develop a bid-based flexible capacity product, which would send an indication of need and value to the market which could then develop important flexible resources such as large hydro pumped storage, flywheel storage, battery storage and other flexible capacity resources. We encourage the ISO to pursue a bid-based flexible capacity product, similar to an ancillary services product or similar to the original ISO tariff "replacement reserve" product.

3. The ISO should reassess the viability of an Hour Ahead market if it is concerned about equivalence between internal generation resources and imports.